

### **REMARKS/ARGUMENTS**

Claims 1-11 stand finally rejected by the Office Action of March 24, 2005. It is requested that the amendments made herein be entered pursuant to the provisions of 37 CFR 1.116. It is requested that claims 1-11 be cancelled and new claim 12 be added. With the entry of this amendment, claim 12 would remain in the application.

New claim 12 is supported by the specification, paragraphs [0012], [0014], and [0018].

The examiner notes the claim for domestic priority but states that the provisional application only teaches  $\text{Pb}(\text{Sc}, \text{Nb})\text{O}_3$  ordered along the [001] direction where the amount of Nb and Sc in each atomic plane is modulated. Claims 1-11 are requested to be cancelled. New claim 12 claims a method of making a ferroelectric material comprising stacked planes of  $\text{Pb}(\text{Sc}, \text{Nb})\text{O}_3$  ordered along the [001] direction where the amount of Nb and Sc is modulated in each plane. Accordingly, it is submitted that claim 12 is adequately supported by the disclosure of the provisional application.

The examiner has objected to the specification as failing to provide proper antecedent basis for the claimed subject matter of claims 1-11. The examiner states that the specification only teaches  $\text{Pb}(\text{Sc}, \text{Nb})\text{O}_3$  ordered along the [001] direction where the amount of Nb and Sc is modulated in each plane and concludes that the specification does not support the claimed materials. Claims 1-11 are requested to be cancelled. New claim 12 claims a method of making a ferroelectric material comprising stacked planes of  $\text{Pb}(\text{Sc}, \text{Nb})\text{O}_3$  ordered along the [001] direction where the amount of Nb and Sc is modulated in each plane. Accordingly, it is submitted that claim 12 is adequately supported by the specification.

The examiner rejects claims 1-11 under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the examiner states that the term "short" in claims 1 and 9 is indefinite and that the specification only teaches a four-plane period. Claims 1-11 are requested to be cancelled. New claim 12 is limited to a four-plane period. Accordingly, it is submitted that this rejection would be overcome by the requested amendments.

The examiner has rejected claims 1-11 under 35 USC 112, first paragraph, because the specification while being enabling for  $\text{Pb}(\text{Sc}, \text{Nb})\text{O}_3$  ordered along the [001] direction where the amount of Nb and Sc is modulated in each plane, does not provide enablement for any ferroelectric perovskite atomically ordered along a direction that is not the polarization direction. Claims 1-11 are requested to be cancelled. New claim 12 is limited to  $\text{Pb}(\text{Sc}, \text{Nb})\text{O}_3$  ordered along the [001] direction where the amount of Nb and Sc is modulated in each plane. Accordingly, it is submitted that this rejection would be overcome by the requested amendments.

The examiner has rejected claims 1 and 3-8 under 35 USC 102(b) as being anticipated by the article by George et al. The examiner states that the reference teaches the enhanced properties at room temperature which falls within the claimed range and that teaching at one point in the range anticipates the invention. The examiner refers to MPEP 2131.03 (I). The examiner's rejection is respectfully traversed for the following reasons.

Claims 1-11 are requested to be cancelled. Claims 1-11 claim a ferroelectric material. New claim 12 claims a method of making a ferroelectric material, comprising

steps including the step of "selecting a specific temperature from any temperature below the Curie temperature of the disordered alloy." It is submitted that the disclosures of the George et al. article do not anticipate claim 12, since the George et al. article does not teach the feasibility of a method of making a ferroelectric including the step of selecting any temperature below the Curie temperature the disordered alloy. Accordingly, it is submitted that new claim 12 is allowable over the George et al. article.

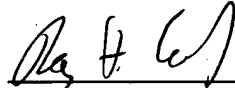
The examiner rejects claims 1-8 under 35 USC 102(b) as being anticipated by the abstract and slides of the presentation given in February 2001. The examiner states that the reference teaches the enhanced properties at room temperature which falls within the claimed range and that teaching at one point in the range anticipates the invention. The examiner refers to MPEP 2131.03 (I). The examiners rejection is respectfully traversed for the following reasons:

Claims 1-11 are requested to be cancelled. Claims 1-11 claim a ferroelectric material. New claim 12 claims a method of making a ferroelectric material, comprising steps including the step of "selecting a specific temperature from any temperature below the Curie temperature of the disordered alloy." It is submitted that the disclosures of the abstract and slides of the presentation given in February 2001 do not anticipate claim 12, since the abstract and slides do not teach the feasibility of a method of making a ferroelectric including the step of selecting any temperature below the Curie temperature the disordered alloy. Accordingly, it is submitted that new claim 12 is allowable over the abstract and slides of the presentation given in February 2001.

The applicant submits that with the entry of the requested amendments, claim 12 would be in condition for allowance and the amendments should be entered pursuant to the provisions of 37 CFR 1.116. Such action is respectfully requested.

Respectfully submitted,

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